

Appl. No. : 09/735,030
Filed : December 11, 2000

penetrate printed circuit boards containing said primary winding and connector pins connecting the secondary winding only penetrate printed circuit boards containing said secondary winding; and

means for externally connecting the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration.

REMARKS

In response to the Office Action mailed October 2 2002, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. As a result of the amendments listed above, Claims 1, 3-7, 9-11, 17 and 18 are pending, Claims 2 and 8 were previously cancelled by an Amendment dated July 2, 2002, and Claims 12-16 were previously subject to a restriction requirement and have been cancelled without prejudice as directed to a non-elected invention. Claims 1, 3, 7, 17 and 18 have been amended by this paper, and Claims 1, 3-7, 9-11, 17 and 18 are presented for further Examination.

The specific changes to the specification and the amended claims are shown on a separate set of pages attached hereto and entitled VERSION WITH MARKINGS TO SHOW CHANGES MADE, which follows the signature page of this Amendment. On this set of pages, the insertions are underlined while the ~~deletions are struck through~~.

Objections:

The Examiner objected to Claim 3 as depending from Claim 2 instead of Claim 1. The Applicant has amended Claim 3 to depend from Claim 1, and requests withdrawal of this objection.

Rejections Under 35 U.S.C. § 103:

The Examiner rejected the pending claims under 35 U.S.C. § 103(a) as being unpatentable over Inoh et al. (U.S. Patent No. 5,521,573) in view of Raggi (U.S. Patent No. 5,179,365).

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The Applicant would like to thank the Examiner for the telephonic interview of February 27, 2002 wherein proposed amendments were discussed to overcome this rejection. Accordingly, Claims 1, 7, 17 and 18 have been amended. The Applicant believes the pending claims are in a condition of allowance and respectfully requests withdrawal of this rejection.

CONCLUSION

The Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments that are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 2/28/03

By: 

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (Twice Amended) An electrical device comprising:
 - a plurality of printed circuit boards configured into a multi-layer configuration;
 - at least a first printed circuit board of said plurality of printed circuit boards comprising a primary winding of a transformer;
 - at least a second printed circuit board of said plurality of printed circuit boards comprising a secondary winding of the transformer; and
 - a plurality of connector pins, wherein each pin of the plurality of connector pins is configured to electrically connect to either the primary winding or the secondary winding, and wherein each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board, and wherein at least two of said first and second printed circuit boards are configured to receive at least one external jumper for externally connecting said configured first and second printed circuit boards in series or in parallel.
3. (Amended) The device of Claim 12, wherein the at least one first printed circuit board and the at least one second printed circuit board are electrically separated from each other.
7. (Twice Amended) An electrical device comprising:
 - a plurality of core members;
 - a plurality of printed circuit boards configured to be stackable in a multi-layer configuration between the core members;
 - at least a first printed circuit board of the plurality of printed circuit boards comprising a primary winding of a transformer;
 - at least a second printed circuit board of the plurality of printed circuit boards comprising a secondary winding of the transformer;
 - ~~a connection member~~ an external jumper configured to selectably connect the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration; and

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a plurality of connector pins configured to electrically connect the windings on the plurality of printed circuit boards to a main circuit board, wherein each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

17. (Amended) An electrical device comprising:

a plurality of core members;

a plurality of printed circuit boards, positioned between the plurality of core members, with each printed circuit board having a plurality of layers, wherein the plurality of printed circuit boards are stackable into a multi-layer configuration;

at least one coil defined on each of the plurality of layers of the plurality of printed circuit boards;

at least a first printed circuit board of the plurality of printed circuit boards comprising a primary winding of a transformer;

at least a second printed circuit board of the plurality of printed circuit boards comprising a secondary winding of a transformer;

~~a connection member~~ an external jumper configured to connect the windings on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration; and

a plurality of connector pins configured to electrically connect the plurality of printed circuit boards to the main circuit board, wherein each pin of the plurality of connector pins penetrates only the at least first printed circuit board of the plurality of printed circuit boards comprising the primary winding or the at least second printed circuit board of the plurality of printed circuit boards comprising the secondary winding.

18. (Amended) An electrical device comprising:

a plurality of printed circuit boards, each printed circuit board having a plurality of layers, wherein the plurality of printed circuit boards are stackable into a multi-layer configuration;

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at least one coil defined on each of the plurality of layers of the plurality of printed circuit boards;

means for configuring electrical connections on the plurality of printed circuit boards to include the at least one coil on each printed circuit board so as to define a primary winding and a secondary winding;

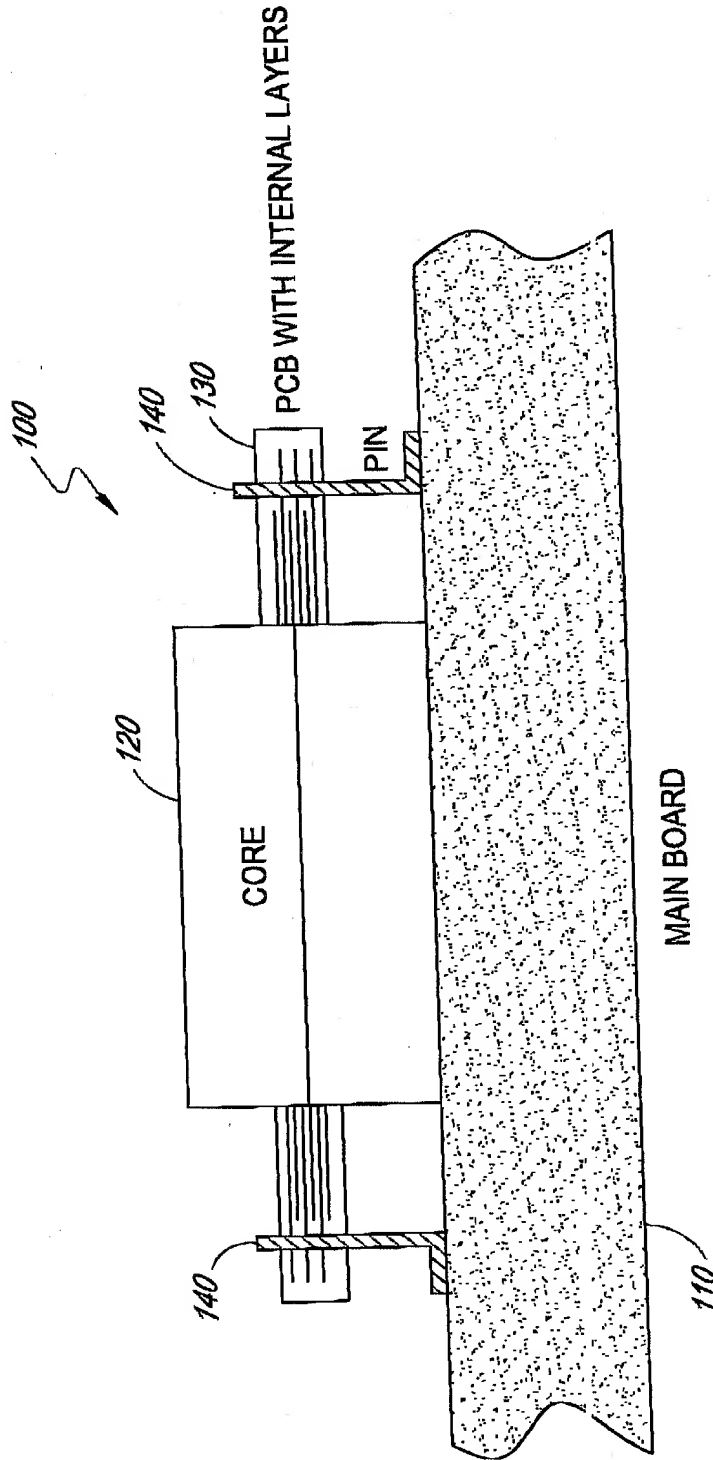
means for connecting the primary winding on the printed circuit boards and the secondary winding on the printed circuit boards to a main circuit board with connector pins in such a manner that the connector pins connecting the primary winding only penetrate printed circuit boards containing said primary winding and connector pins connecting the secondary winding only penetrate printed circuit boards containing said secondary winding; and

means for externally connecting the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration.

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MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD
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FIG. 1A
(PRIOR ART)

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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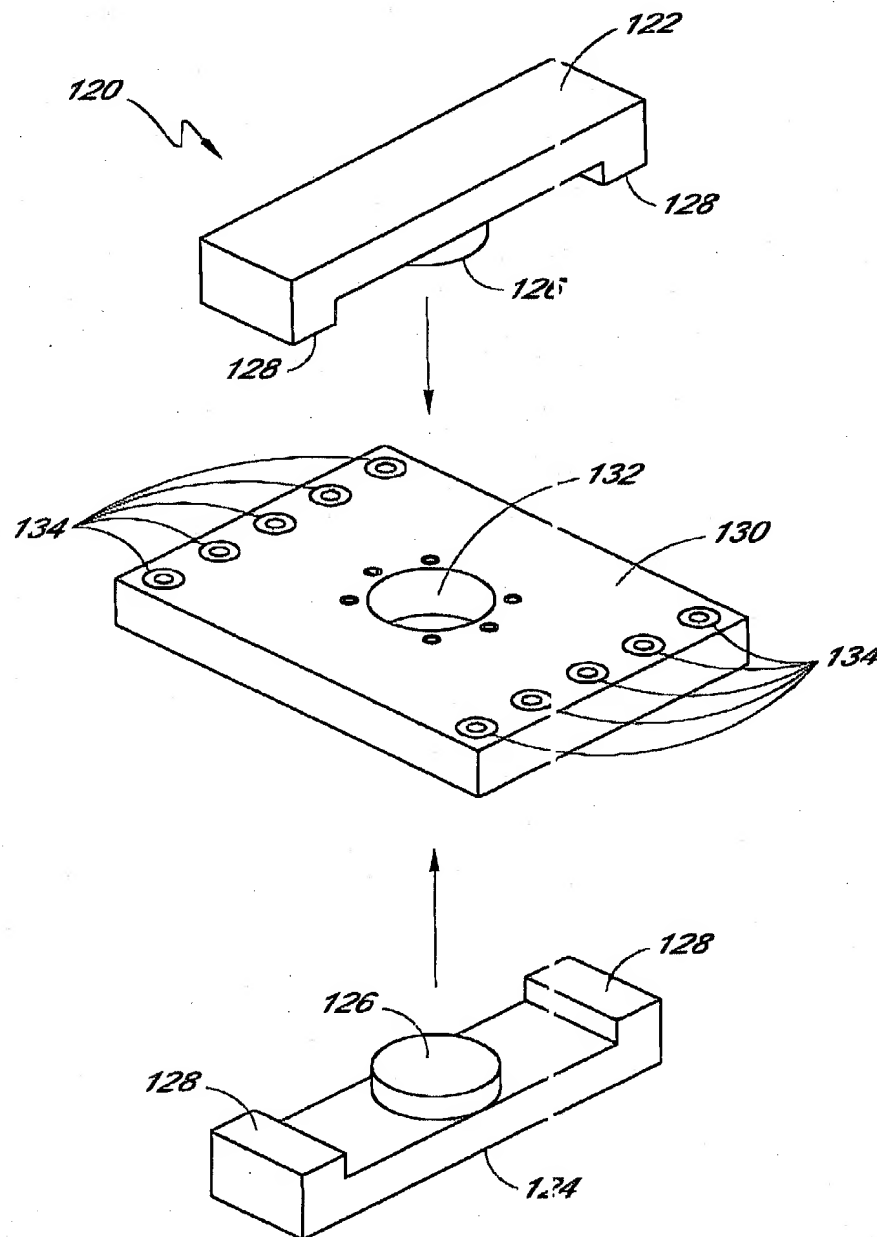


FIG. 1B
(PRIOR ART)

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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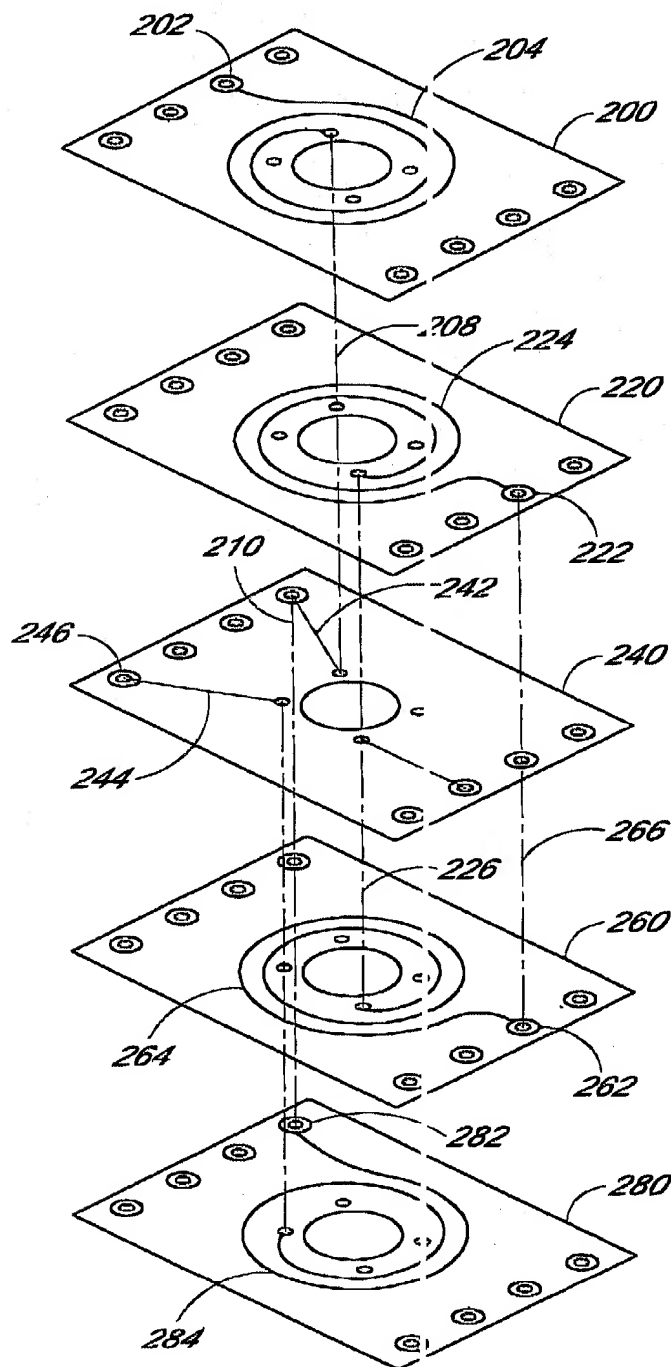


FIG. 2
(PRIOR ART)

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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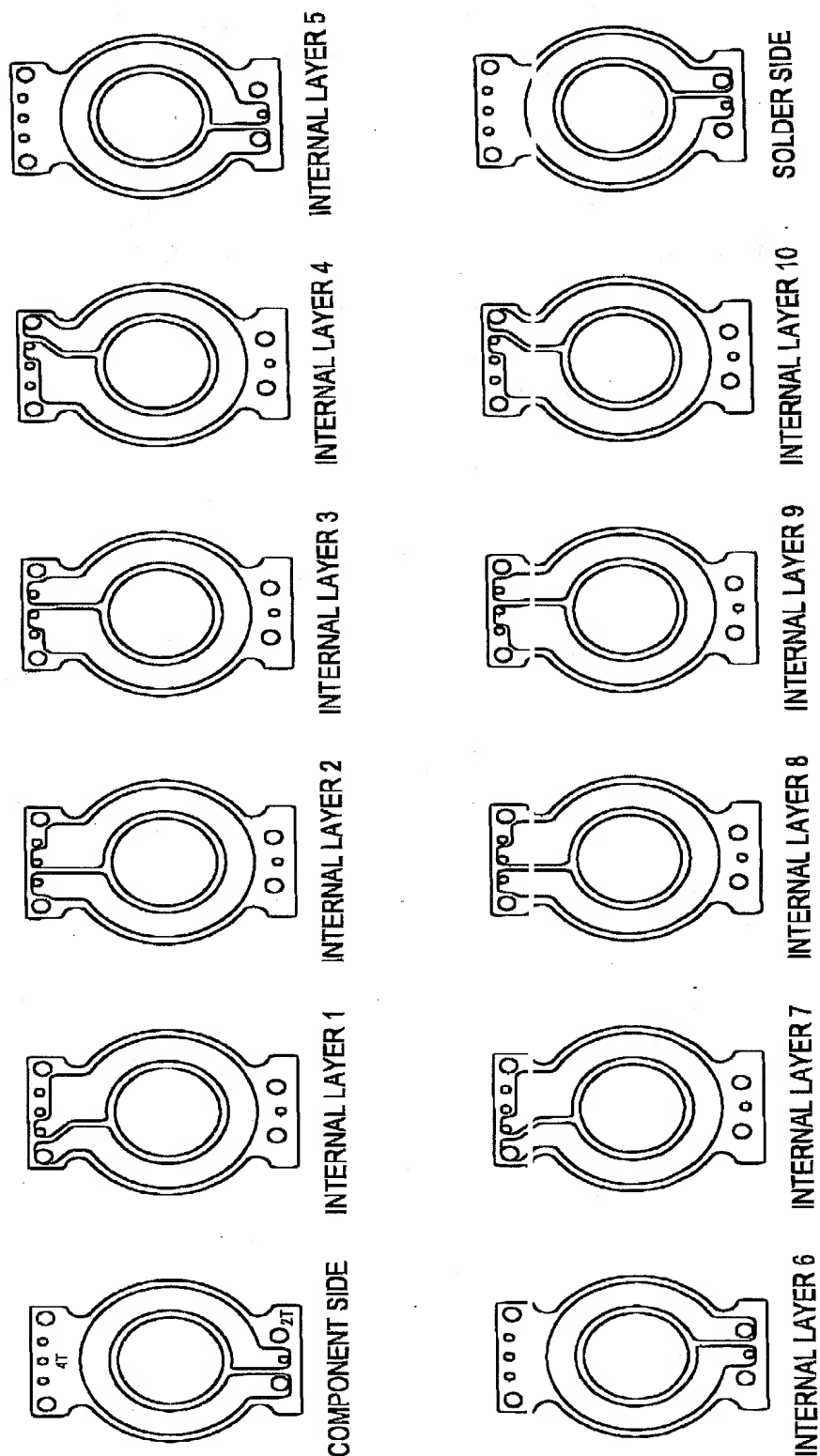


FIG. 3

(PRIOR ART)

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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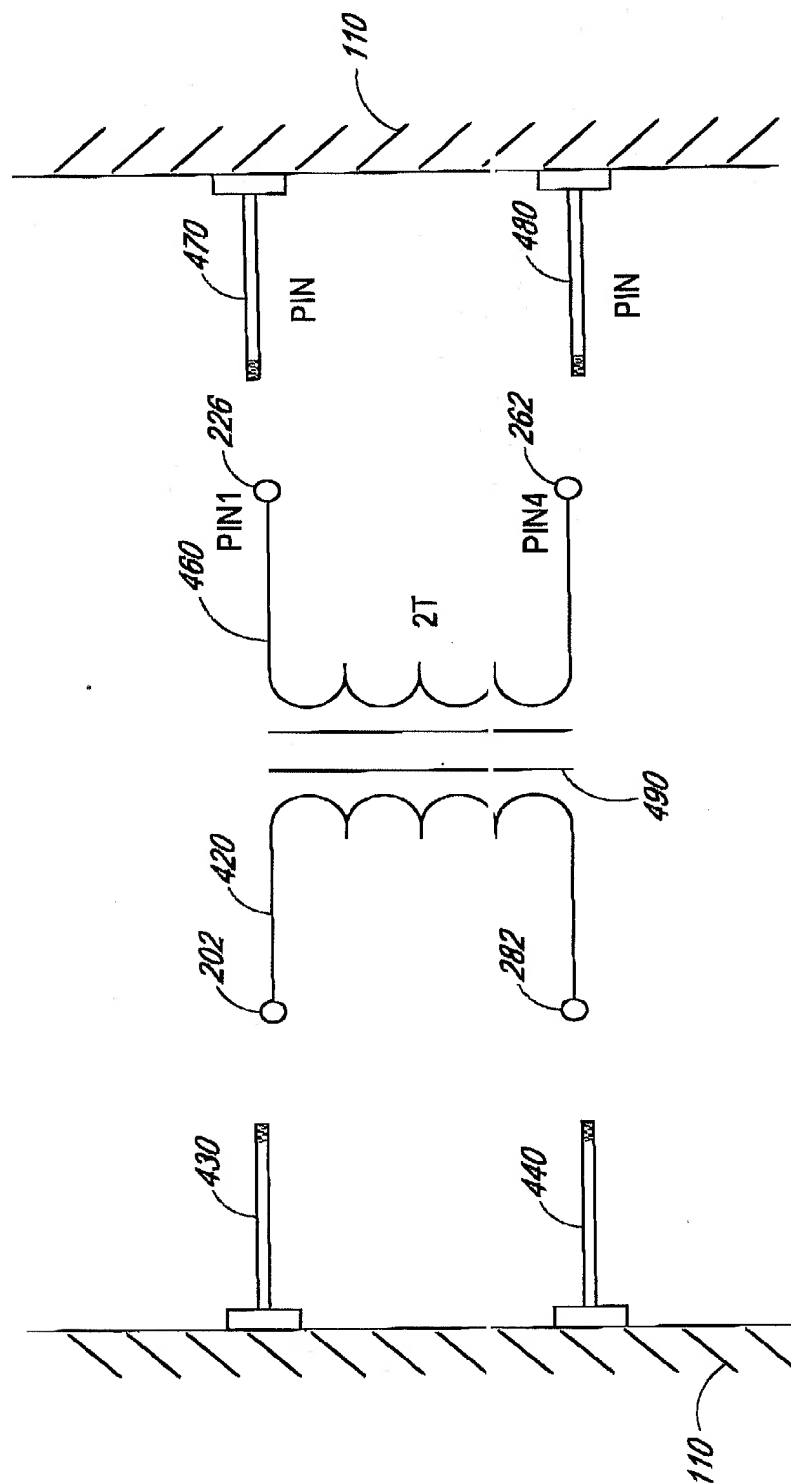


FIG. 4
(PRIOR ART)

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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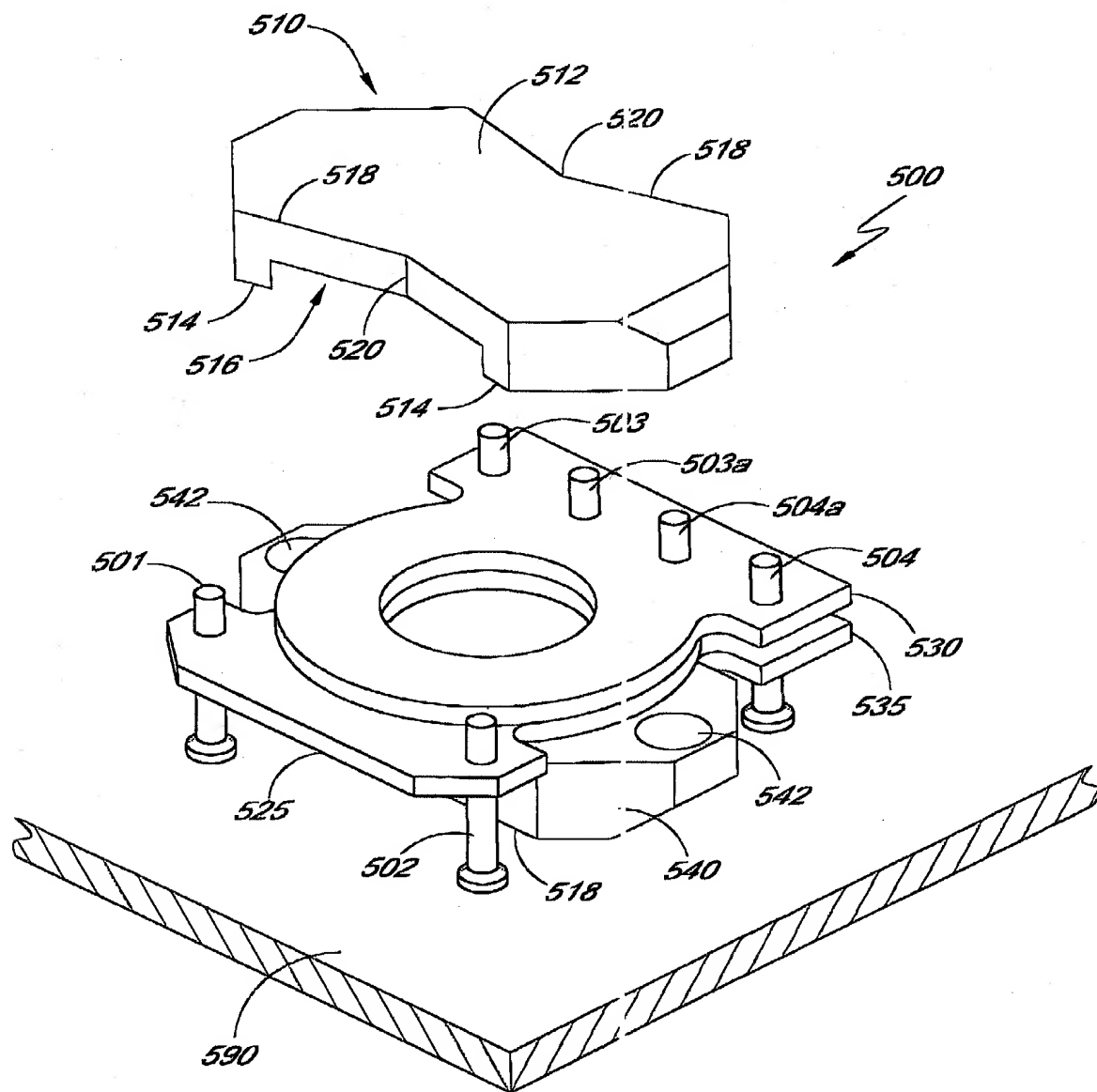


FIG. 5

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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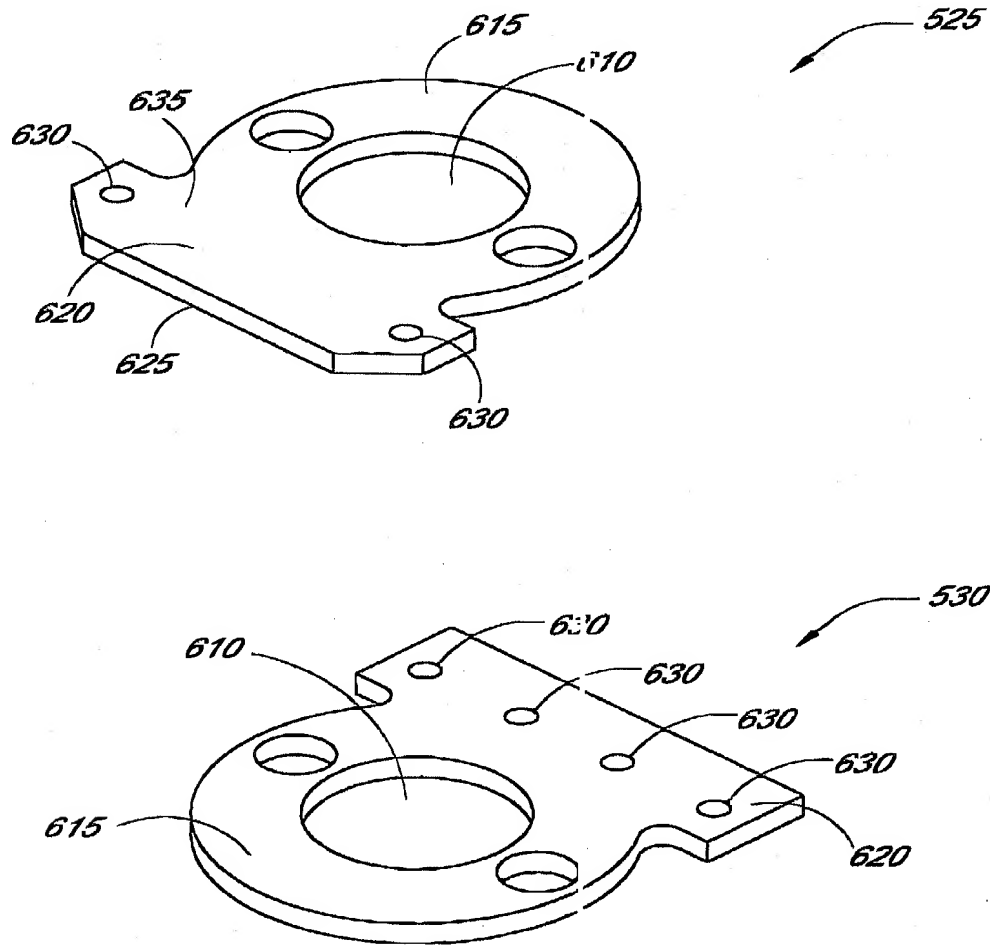


FIG. 6

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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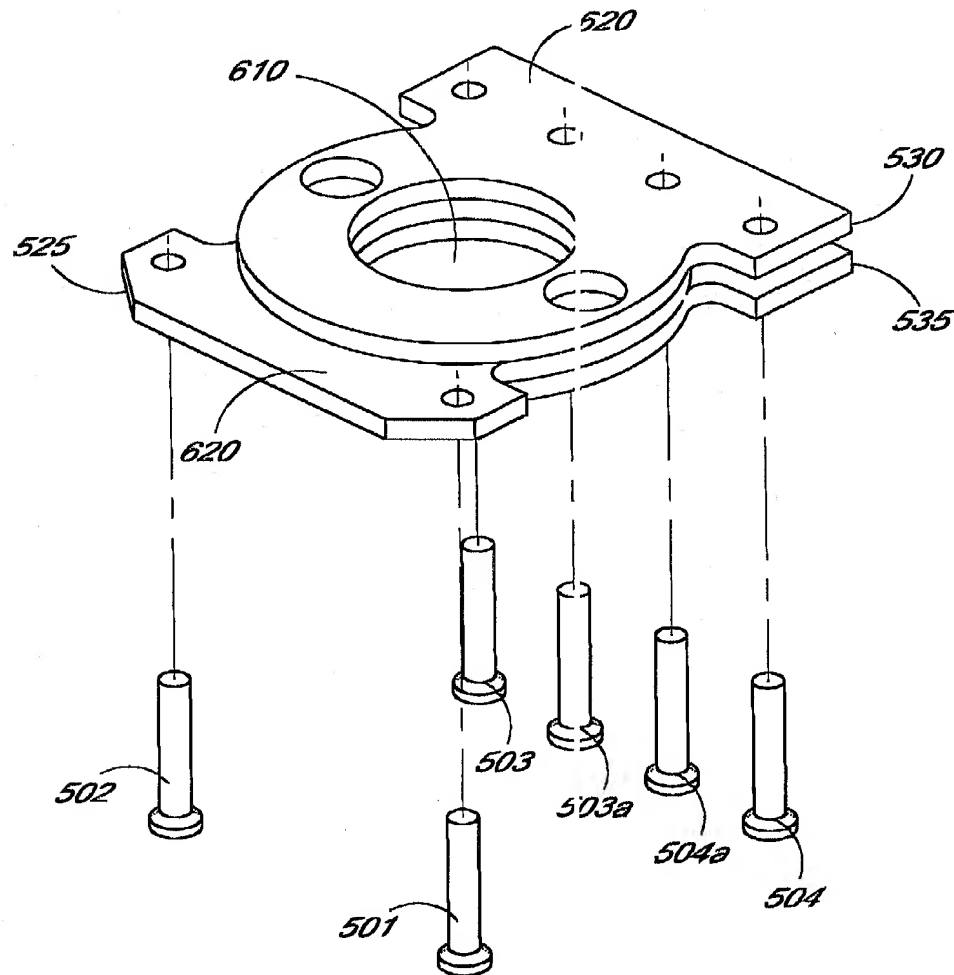


FIG. 7

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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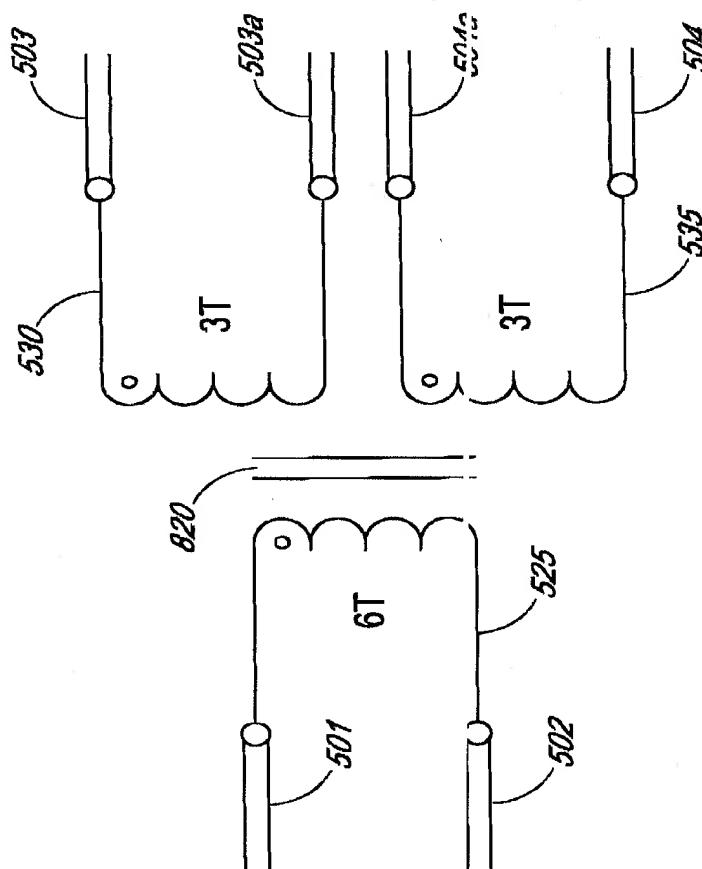


FIG. 8

MULTI-LAYERED AND USER-CONFIGURABLE MICRO-PRINTED CIRCUIT BOARD

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FIG. 9A

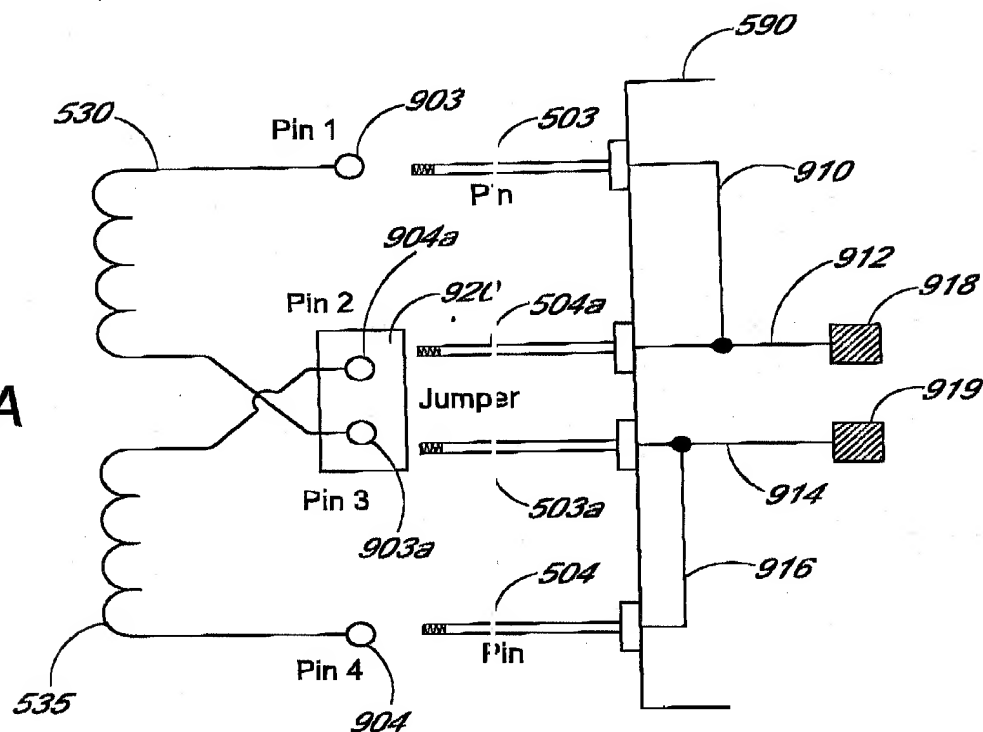


FIG. 9B

